

CLAIMS

1. A process for preparing a toner comprising the step of pulverizing a resin composition with a jet type pulverizer comprising a venturi nozzle and an impact member arranged so as to face the venturi nozzle, wherein r_2/r_1 is 0.3 or less, wherein r_1 is a radius of the largest circle R_1 among the circles formed with 3 points including any given 2 points located on the outer circumference of the impact side of said impact member, and one point located on a line connecting the 2 points in the shortest distance on the impact side; and r_2 is a radius of the largest circle R_2 among the circles formed with 3 points including 2 points located on an outer circumference of the impact side, intersecting with a line perpendicularly at a given point with the line connecting the 3 points forming the circle R_1 , and one point located on a line connecting the 2 points in the shortest distance on the impact side.
2. The process according to claim 1 or 2, wherein the impact member has an impact side comprising at least a part of a cylindrical member having a true circle or an oval on its bottom side.
3. The process according to claim 2, wherein the impact member is a partial cylindrical member obtained by cutting a cylindrical member in a direction perpendicular to a bottom.
4. The process according to any one of claims 1 to 3, wherein the venturi nozzle comprises an inlet, a throat part, a diffuser part and an outlet in that order,

wherein an inner side of said throat part forms a smooth, continuous arc starting from the inlet to the diffuser part.

5 5. The process according to any one of claims 1 to 4, wherein the venturi nozzle comprises an inlet, a throat part, a diffuser part, a straight part and an outlet in that order.

10 6. The process according to any one of claims 1 to 5, wherein the resin composition is mixed with a fine inorganic particle, and thereafter the mixture is fed to a jet type pulverizer.

7. The process according to claim 6, wherein the fine inorganic particle is made of silica.

15 8. The process according to any one of claims 1 to 7, wherein the resin composition comprises a resin binder comprising at least one member selected from the group consisting of polyesters, vinyl resins such as styrene-acrylic resins, epoxy resins, polycarbonates, polyurethanes, and a hybrid resin in which two or more resin components are partially chemically bonded.

20 9. The process according to any one of claims 1 to 8, wherein the resin composition is a resin composition having a particle size of 3 mm or less, obtained by melt-kneading a mixture comprising a resin binder and a colorant, and thereafter pulverizing the mixture.

10. The process according to any one of claims 1 to 9, wherein the toner has a volume-average particle size (D_4) of 7 μm or less.

11. An impact member for a jet type pulverizer, wherein the impact member satisfies r_2/r_1 of 0.3 or less,

wherein r_1 is a radius of the largest circle R_1 among the circles formed with 3 points including any given 2 points located on the outer circumference of the impact side of said impact member, and one point located on a line connecting the 2 points in the shortest distance on the impact side; and

r_2 is a radius of the largest circle R_2 among the circles formed with 3 points including 2 points located on an outer circumference of the impact side, perpendicularly intersecting at a given point with the line connecting the 3 points forming the circle R_1 , and one point located on a line connecting the 2 points in the shortest distance on the impact side.

12. A jet type pulverizer comprising a venturi nozzle and an impact member arranged so as to face the venturi nozzle, wherein r_2/r_1 is 0.3 or less,

wherein r_1 is a radius of the largest circle R_1 among the circles formed with 3 points including any given 2 points located on the outer circumference of the impact side of said impact member, and one point located on a line connecting the 2 points in the shortest distance on the impact side; and

r_2 is a radius of the largest circle R_2 among the circles formed with 3 points including 2 points located on an outer circumference of the impact side, perpendicularly intersecting at a given point with the line connecting the 3 points forming the circle R_1 , and one point located on a line connecting the 2 points in

the shortest distance on the impact side.